

DIGITAL CAMERA

A Kodak® DC50 color digital camera is available to students. The student must obtain permission to use the camera from the instructor or the laboratory/operations manager. The camera can then be signed out for use.

TAKING PICTURES

The following are steps for taking pictures with the DC50 digital camera.

Turning On and Taking Pictures

Pull the sliding cover gently away from the camera. The sliding cover is located on the front of the camera. When the camera is on, icons appear on the LCD screen at the back of the unit. Hold the camera with both hands and place your right hand inside the strap. The shutter and lens zoom buttons are located at the top of the camera. Slide your right hand through the hand strap with your index finger resting on the shutter button and allow the camera to rest on your thumb.

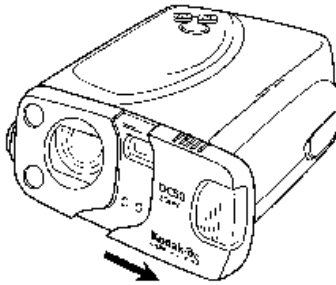


Fig. 1. Turning on the camera.

Framing Subject Matter in Viewfinder

Look through the viewfinder on the back of the camera. Position the Auto Focus target marks on the subject. The Auto Focus target marks are the solid and dashed circles in the viewfinder. The solid circles are for distances to infinity, and the dashed marks are for pictures up to 70 centimeters. Use the small frame marked with a flower when closeup mode is selected. The DC-50 can zoom from 37 to 111 mm.

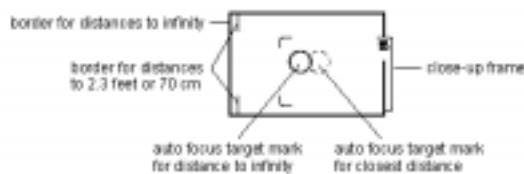


Fig. 2. Viewfinder

Capturing an Image

Hold the camera as steady as possible when you press the shutter button. Press the shutter button half way down. The camera measures the ambient light, sets the exposure and white balance, and automatically focuses the lens.

A green light flashes on the viewfinder if the subject is too close or too far away. When the subject is properly framed, press the shutter button all the way down. There will be a short delay between the time the button is pressed and the time the picture is taken. The green light will flash while the camera processes the image. Another picture cannot be taken until the green light stops flashing. The counter on the LCD will add one to the number of pictures taken.

CAMERA OPTIONS

To select any camera option press the MODE button on the back of the camera. The icon flashes when selected. Press the SELECT button to advance through the options until the desired function is chosen.

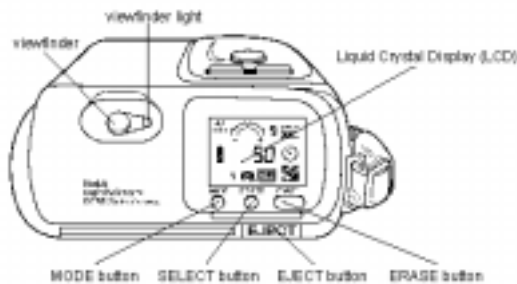


Fig. 3. Illustration of camera mode options.

Auto Focus

The Auto Focus (AF) function allows you to select from three focus settings: Multi-spot auto focus (three dots under the AF icon), single spot auto focus (one dot under the AF icon), and close-up focus (a flower icon). Use the MODE button to select the desired Auto Focus icon. Once the camera is turned off, the default settings are automatically reset the next time the camera is turned on.

Exposure Compensation

The exposure compensation icon (left and right arrow with positive sign on right and negative sign on left) allows you to change the exposure to adjust the camera for too dim or too bright lighting. The exposure value can be measured to plus or minus two steps (equivalent to aperture settings) from the automatically measured setting.

Flash

The Flash Icon allows you to select from three flash settings: automatic flash (zig-zag down arrow with an A), flash off (Zig-Zag down arrow in a circle), and flash on (Zig-zag down arrow). Automatic flash determines if the flash should be used depending on the existing light. Flash on uses the flash regardless of existing light. Flash off uses no flash.

Image Quality

The image quality icon allows you to select from three image quality settings: good, better, and best. The actual resolution does not change (it is 144 dots per inch). The lower quality creates a smaller image. Good is selecting the single dark square under the word "Quality" on the LCD screen. Better is a medium quality and is selected by choosing two dark squares. Best is a high quality and is selected by three dark squares. Note that since the camera has a limited amount of memory, selecting higher quality (thus stored as a larger image) images results in fewer pictures.

Images Remaining Counter

The Images remaining counter appears near the center of the LCD. The number is the approximate number of pictures that can be taken. This number varies depending on the image quality chosen. When the counter hits 0 no more pictures can be taken. The images must either be transferred to the computer or erased, in which case they are non-retrievable.

CONNECTING TO COMPUTER

When through taking pictures with the DC50 camera, the images are transfered from the camera to a computer. The pictures are normally transfered, converted to an applicable format, and stored on disk.

Connect the DC50 to the serial cable on CAD 12 if using Windows® or the modem cable on the Macintosh Centris 650 if using that system. The cable connections for the camera are located below a small rubber cover on the side of the unit.

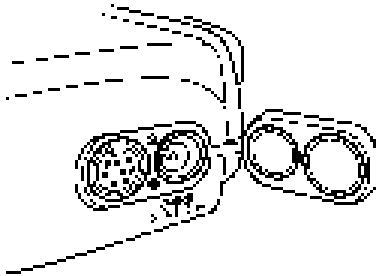


Fig. 4. Cable Connections on the Camera

Power Supply

An auxiliary power supply is also available for use with the camera. It is suggested you connect the auxiliary power unit when using the camera in conjunction with the computer. Since transfers are often lengthy, the power supply saves the excessive drain on the batteries within the camera.

USING PHOTENHANCER

The primary software for transferring, converting, and storing the files is Kodak PhotoEnhancer® which is available on both the Macintosh Centris® 650 and Windows.

To use the PhotoEnhancer software, the camera must first be connected to the computer and turned on. On the desktop, locate and open the PhotoEnhancer software. Several options are available within the software menu.

NOTE: Detailed instructions for using the Kodak PhotoEnhancer software are available in Room 206 in the form of a PDF (Portable Document Format) file. The PDF file (Photoen.pdf) is stored in the R:\CADLAB\DOC directory. It can be viewed by loading the Adobe Acrobat® software and then viewing the file.

Downloading Pictures to Computer

Choose the CAMERA menu and select VIEW SLIDES IN CAMERA to display the pictures currently in the camera as a series of slides. A dialog box appears so you can select the picture or range of pictures stored on the camera.

Saving Images to Disk

Choose MOVE ALL CAMERA PICTURES TO DISK from the CAMERA menu to transfer pictures from the camera to a disk. A dialog box appears so you can choose to move a picture or a range of pictures. A dialog box appears allowing you to select the destination folder (directory) and drive.

Give the file a name and then select OK to save the file. Note that some operating systems (i.e. MS-DOS have a limit of eight character file names.

Converting an Image

Using FILE OPEN to open the image. Use FILE SAVE AS to save the file in another format. Select the color depth (the more colors the larger the file size) and file type to be saved. Make sure you check to see what file types are supported by the application that will utilize the image. Choose OK to save the file.

ERASING IMAGES ON CAMERA

The images can be erased using the MODE select on the camera or erasing the images after transferring them in the PhotoEnhancer software.

On the camera, the erase images icon appears only when pictures are in the cameras internal memory. To erase pictures press the MODE button until the erase images icon flashes. The erase images icon looks like an eraser in the lower right corner of the LCD. Press the ERASE button and hold it for two seconds. The erase images icon flashes indicating that images are being deleted. Release the ERASE button. When all the pictures are deleted the erase images icon disappears and the counter returns to the maximum number of pictures which can be taken depending on the image quality.